CLAIMS

Having thus described the invention, we claim:

1. An apparatus for spraying powder coating material having a powder flow path, wherein said powder flow path has a charging surface for triboelectrically charging powder coating material which comes in contact with said charging surface, said charging surface comprising a negative tribocharging material selected from the group consisting of: polyamide resin blends, fiber reinforced polyamides, aminoplastic resins, acetal polymers combined with a fluorinated hydrocarbon resin and acetal copolymers combined with a fluorinated hydrocarbon resin, and mixtures thereof.

2. The spray apparatus of claim 1 further comprising one or more air passages formed through said charging surface, said air passages being in a fluid communication with a source of compressed air.

3. The spray apparatus of claim 1 further comprising an electrical conductor provided adjacent said charging surface, said electrical conductor being connected to one of an electrical ground or a source of electrical potential.

4. The spray apparatus of claim 3 further comprising one or more air passages formed through said charging surface, said air passages being in a fluid communication with a source of compressed air.

5. The apparatus of claim 1 wherein said negative tribocharging material comprises an acetal homopolymer with polytetrafluoroethylene fibers.

6. The apparatus of claim 1 wherein said negative tribocharging material comprises DELRIN AF.

7. The apparatus of claim 1 wherein said negative tribocharging material comprises polyamide resin blends.

8. The apparatus of claim 1 wherein said negative tribocharging material comprises aminoplastic resins.

9. The apparatus of claim 1 wherein said negative tribocharging material comprises fiber reinforced polyamides.

10. The apparatus of claim 1 wherein said negative tribocharging material comprises an acetal copolymer.